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For a long time the expense of the short sea-voyage, *viâ* Panama, and the length of the long sea-voyage, *viâ* Cape Horn, will prevent the population really wanted in the country finding its way there from England. As an inducement, free grants of land ought to be given. The probability is that the class of small farmers required will be supplied from amongst the hardy settlers of Canada. These men are eminently qualified for developing and making the most of the resources of both British Columbia and Vancouver Island.

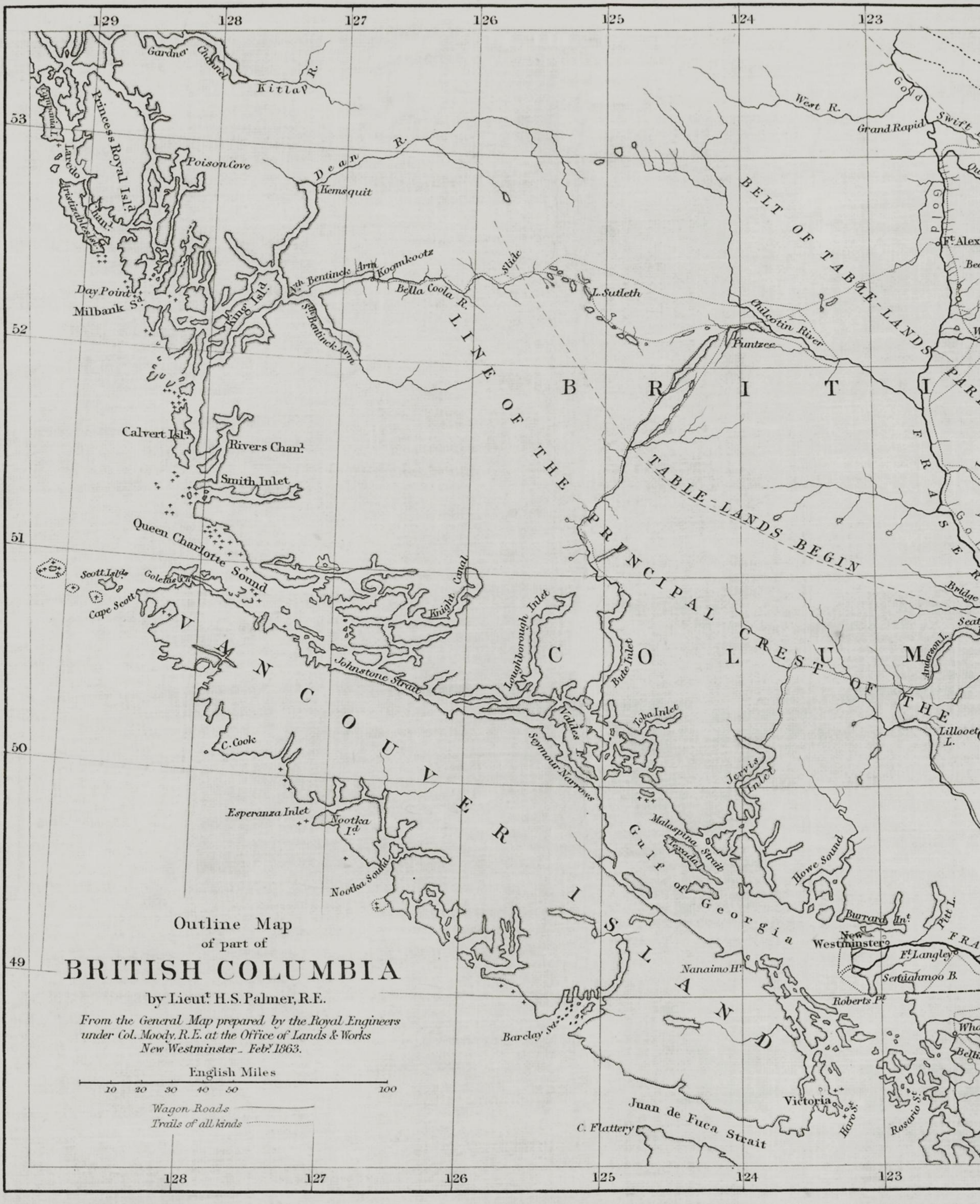
The present population of Victoria and of Vancouver Island generally numbers probably 6000; but there is, besides, a large floating population consisting chiefly of miners.

X.—*Remarks upon the Geography and Natural Capabilities of British Columbia, and the Condition of its principal Gold-Fields.*

By Lieutenant H. S. PALMER, R.E.

Read, March 14, 1864.

THE discovery of gold in the extreme west of British North America, in the year 1858, was destined to prove an event of more than passing importance in the history of modern colonial progress. Upwards of 200,000 square miles of savage territory were at once erected into the colony of British Columbia, and the new region became hastily peopled by hordes of eager gold-seekers from the neighbouring states. The shallow "bars" of the Fraser and Thompson Rivers soon ceased to be profitable; but step by step, with varying success, yet unabating vigour, the alluvial gold was traced upwards to its parent sources in the hills, and, in 1861, three years of patient toil were rewarded by the discovery of the now famous gold-fields of Cariboo. The productiveness of these new mines has, during the last two years, been so great as to place them in the first rank of modern gold discoveries; and, indeed, a comparison of their returns with those of the most notorious districts in California and Australia encourages the belief that the auriferous riches of Cariboo are the greatest hitherto discovered. While the gold-miner's incursions have been thus rapid and extensive, civilization and enterprise have not been far behind him, and the young colony now attracts attention by its various commercial and agricultural, as well as its mineral, advantages. During the last five years, the writer has had frequent opportunities of travelling somewhat extensively in British Columbia, and the object of this communication is to describe, with as much detail as a short paper will admit of, its physical geography and natural capabilities, and the condition of its principal gold-fields.



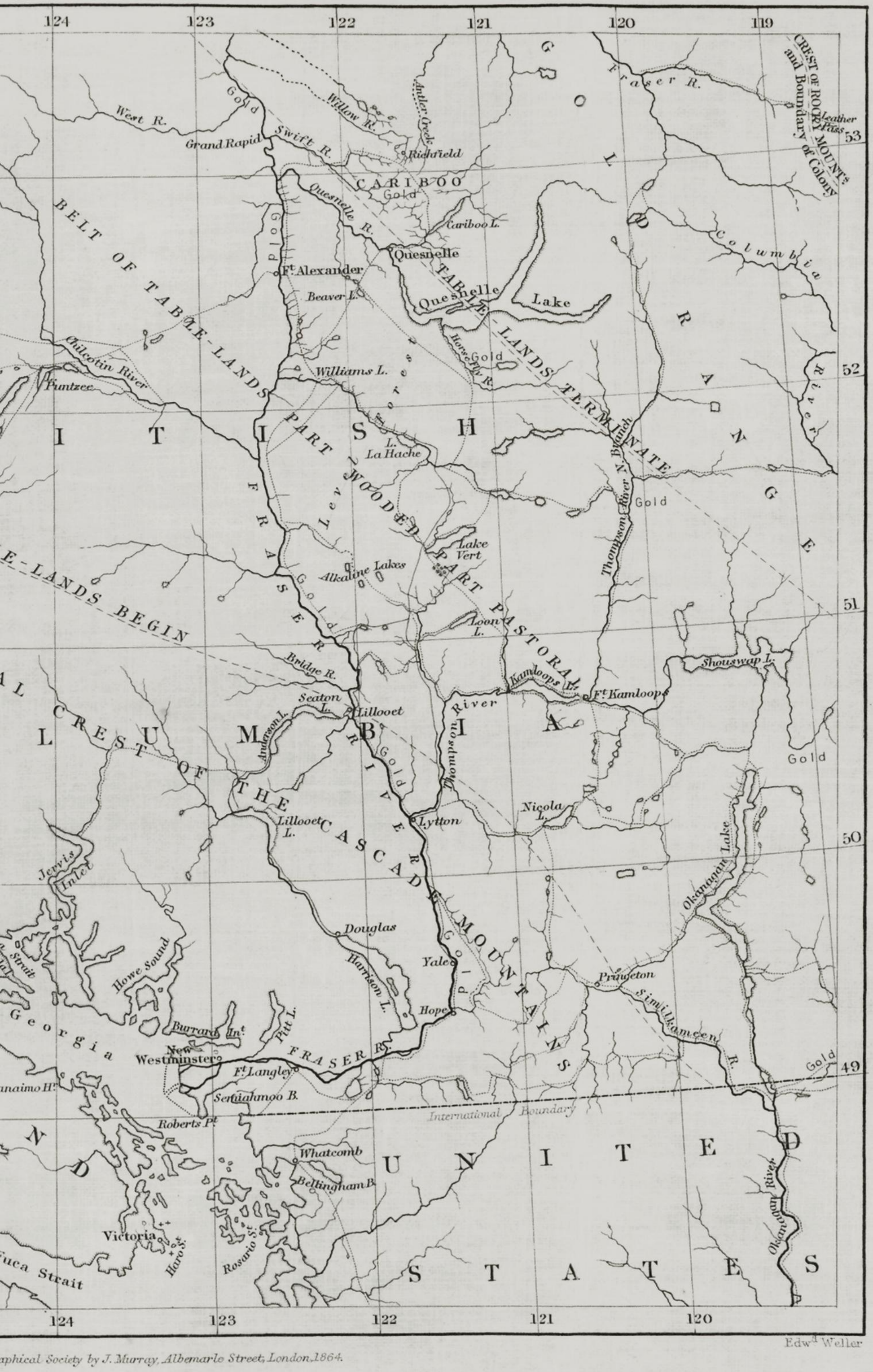
Outline Map
of part of

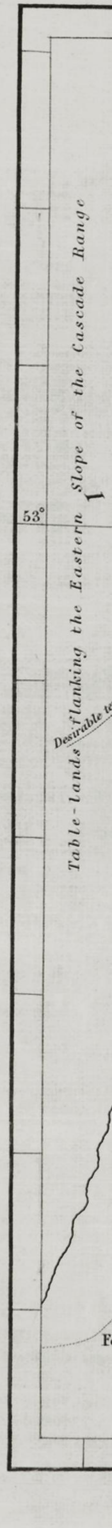
BRITISH COLUMBIA

by Lieut^t H.S. Palmer, R.E.

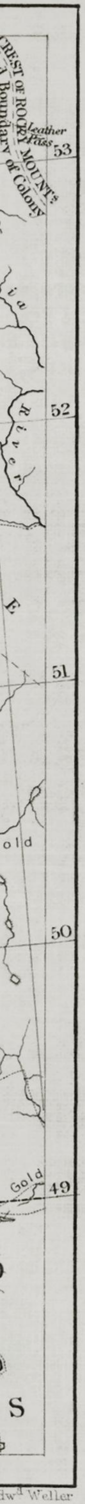
From the General Map prepared by the Royal Engineers under Col. Moody, R.E. at the Office of Lands & Works New Westminster _ Feb^y 1863.

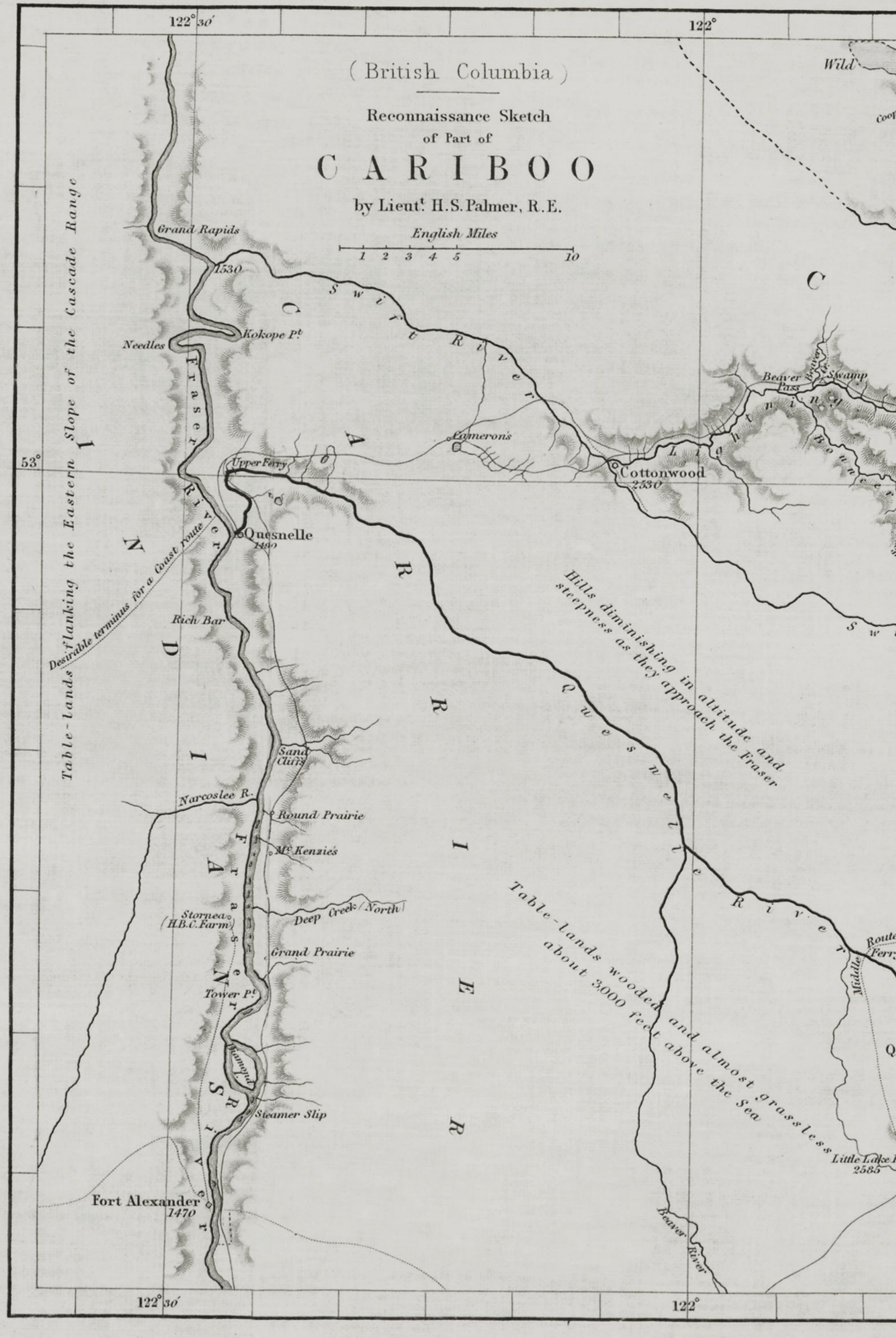
Published for the Journal of the Royal Geographical Society by J. Murray, Albemarle Street, London,





aphical Society by J. Murray, Albemarle Street, London, 1864.

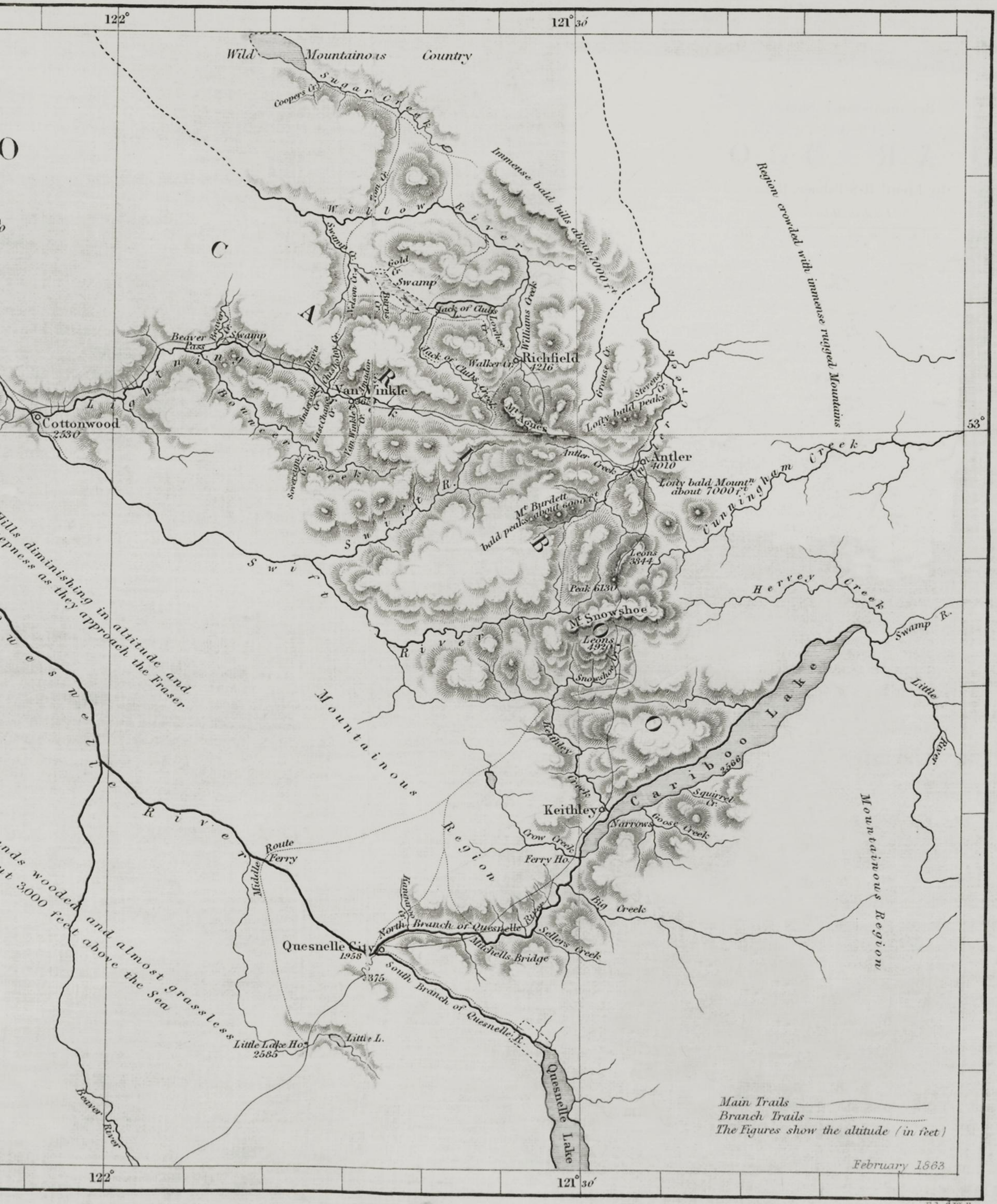



(British Columbia)

Reconnaissance Sketch
of Part of
CARIBOO
by Lieut. H.S. Palmer, R.E.

Edwd Weller

Published for the Journal of the Royal Geographical Society, by



ished for the Journal of the Royal Geographical Society, by J. Murray Albemarle Street London 1864.

Edwd. Weller

The seaboard of British Columbia, commencing at the international boundary-line (lat. 49° N.), extends for some 500 miles in a general northwesterly direction. Foremost among its peculiarities is the extraordinary length of shore-line, bearing, indeed, an enormous proportion to the actual span of the coast, and due to the existence of a continuous series of long arms of the sea, which everywhere pierce the coast; and, in some instances, penetrate inland to distances of 80 and even 100 miles. Numberless archipelagos of rocky islets stud the whole seaboard, and, bordering closely upon the mainland, furnish protection to its shores; and, further still to seaward, Vancouver and Queen Charlotte Islands, separated only by narrow straits from the continent, form huge natural breakwaters which shield it from the full force of the Pacific. Thus, the entire seaboard, with its inlets and numerous outlying islands, presents an extraordinary network of sheltered water-communication, so continuous, indeed, that the experienced navigator, familiar with its intricacies and perplexing tidal irregularities, may work his way along shore from end to end of the coast, and rarely, if ever, be forced to seek the open sea. The inlets are everywhere deep and narrow, and, although subject to strong winds and tides, and by no means abounding in anchorages, they present scarcely any material obstacles to navigation by steam-vessels of the largest class. Piles of giant mountains rise everywhere abruptly from their shores, and snowy peaks and glaciers, pine-clad slopes, rugged cliffs and precipices, gloomy valleys and picturesque waterfalls, combine in endless succession to form an aggregate of sublime and wild, though desolate and unattractive, scenery.

According to the most recent Parliamentary enactments, the colony of British Columbia, apart from its numerous island dependencies, comprises all the territories stretching from the 49th to the 60th parallel of latitude, and from the culminating ridge of the Rocky Mountains to the shores of the Pacific, a small strip of Russian territory along the extreme northern seaboard alone excepted; and beyond the parallel 56° N., that portion of the soil to the east of the Rocky Mountains, extending as far as the 121st meridian, is further included within the bounds of the colony. But, of the immense area thus circumscribed, all that portion lying to the north of the 54th parallel remains, and is likely to remain, an uninhabited wilderness. Little only is known of these extensive solitudes. Indeed, the officers and servants of the Hudson Bay Company, who dwell at fur-trading posts widely scattered throughout the district, and are, with the exception of scanty native tribes, its sole inhabitants, are the only white people possessing any personal acquaintance whatever with its geography and natural capabilities. From them we learn that, although not entirely devoid of attractive features and occasional patches of good soil, this portion of the colony is on the whole cheerless and uninviting, and especially ill-adapted for occupation by man. Moreover, its high latitude and extreme elevation, and the rigorous climatic influences to which it is subject, are elements little likely to encourage its speedy development; and, coupling with these drawbacks the circumstance that settlement is but slowly creeping northward from the southern bounds of the colony, it may fairly be inferred that the region north of the 54th parallel presents a very slight prospect of early occupation. On this account, and in the absence of fuller and more perfect information than is at present to be had, the whole country north of this line will be purposely omitted from consideration in the following remarks upon the interior.

Looking inland, then, from the sea, the southern and explored part of the colony is found to be naturally divided into three great zones or belts of nearly equal areas, differing in their physical features, as well as in soil, climate, and vegetation; and bounded by lines generally parallel in direction to the coast on the one hand and the great backbone of the continent on the other. The first great belt may be defined as extending northwesterly from the international boundary-line to the 54th parallel, and inland to a distance of 120 miles from the coast. The area comprised within these limits is almost wholly occupied by a continuation of the great Cascade Range of Oregon and Washington Territories. Indeed, the estuary of the Fraser in the extreme south, where the hills recede to a distance of 40 miles from the coast, is the only patch of any size that can fairly claim the character of lowland and level country. Elsewhere, the Cascade Range, with its countless spurs and outlying ridges, occupies the whole of this broad strip of territory, and forms a massive sea-wall of pine-clad mountains, descending, as has been described, almost perpendicularly to the very shores of the inlets. The principal crest of this chain attains to an elevation of from 5000 to 6000 feet above the sea, at a mean distance of 70 miles from the coast. It is faintly marked by peaks rising but little above the neighbouring ranges. The magnificent isolated peaks, which, to the south of the boundary-line, tower up to altitudes of 15,000 and even 20,000 feet, and serve to indicate distinctly the general bearing of the range, are wholly wanting in British territory. The western slope, open to mild winds and genial showers from the Pacific, is everywhere clothed with pine forests of remarkable grandeur, stretching from the valleys to almost the highest hill-tops, and concealing at the lower elevations a massive, impenetrable undergrowth of deciduous bushes. On the opposite slope the climate is drier, the forests are less dense, and the pines of smaller proportions; and, as we approach the eastern limits of the range, underwood becomes more rare, the general profile less rugged and abrupt, and the country begins to assume a more attractive aspect.

But it is to be feared that, throughout the coast-range, no portion of the soil holds out any hope of extensive agricultural improvement; with few exceptions, the rivers which drain the hill-system are short and impetuous, and, pouring down the western slopes, find their way through inconsiderable valleys to the coast, and discharge themselves at the heads of the inlets. Even the larger streams, which, rising in the interior, thread their way through the heart of the range, are confined in narrow, precipitous passes or "cañons," through which they rush at prodigious velocities on their passage to the sea. So that, dismissing from consideration the small fertile patches in the river-bottoms, which are so contracted and thickly-timbered as to be of little avail for purposes of cultivation, the whole of this great belt under discussion, the Fraser estuary alone excepted, can only be regarded —from its inaccessibility, and its mountainous and forest-bound character—as an inhospitable wilderness, practically unsuited to purposes of agricultural settlement. Its mineral resources, and the region is not wanting in indications of vast metalliferous wealth, have yet to be explored. But, although comparatively valueless at present to the white settler, and, in fact, almost altogether unoccupied by him, except in its southern extremity, this mountainous belt is not without its substantial attractions to the native Indian. Many varieties of furred animals haunt its vast forests, and are hunted and trapped in the winter months for the sake of their skins and their meat. Indeed, the furs taken in the northern part of the Cascade Range are of the most valuable kinds, and the hunter finds a profitable market for them at the various ports and trading stations along the coast. Besides these, countless varieties of fish and waterfowl frequent the rivers and highland lakes, and furnish the Indian with both summer and winter food; beaver, valuable also for the sake of their skins, abound at high altitudes in the swamps, and wholesome berries and wild fruits grow in great profusion in the valleys and river-bottoms.

Emerging from this cheerless tract of mountain and forest, the traveller enters the second or midland belt, stretching from the southern bounds of the colony to the 54th parallel, and inland to a mean distance of about 110 miles from the eastern limits of the Cascade Range, and comprising an area of at least 45,000 square miles. The region thus defined exhibits a marked contrast to the coast district in its scenery and physical aspect. It may be described in general terms as a lofty, undulating table-land, traversed by numerous low ranges of hills, which enclose broad, well-watered, and not unfertile valleys. A group of rivers in the extreme south flow across the border towards the Columbia, but the Fraser is the main artery which receives nearly all the streams that drain the central and northern portions. Besides the main stream, many of the largest of its tributaries, such as the Chilcotin, the Thompson, the West River, and the Quesnelle, flow in deep valleys and chasms, far below the general level of the table-lands. All these rivers are beset by a constant succession of rapids, shoals, and waterfalls, and are, therefore (with the single exception of the Fraser), wholly unnavigable; and they exhibit throughout their course river-scenery of the grandest description. But the brooks and smaller rivers, which traverse the more elevated portions of the plateau, are entirely different in character, winding sluggishly, at high altitudes, through comparatively level districts, and communicating fertility to the neighbouring soil. In common with the larger tributaries, they occasionally spread out into picturesque lakes, which are frequented by beaver and by many varieties of fish and waterfowl. They are marked by no rapid changes in level until the last few miles of their course, when, arriving at the valleys of the principal arteries, they break abruptly away from the highlands, and descend swiftly in narrow gorges by a succession of rapids and waterfalls.

The scenery of the whole midland belt, especially of that portion of it lying to the east of the 124th meridian, is exceedingly beautiful and picturesque. The highest uplands are all more or less thickly timbered, but the valleys present a delightful panorama of woodland and prairie, flanked by miles of rolling hills, swelling gently from the margins of the streams, and picturesquely dotted with yellow pines. The forests are almost entirely free from underwood, and, with the exception of a few worthless tracts, the whole face of the country—hill and dale, woodland and plain—is covered with an abundant growth of grass, possessing nutritive properties of a very high order. Hence, its value to the colony as a grazing district is of the greatest importance. Indeed, the "bunch-grass," so called from the circumstance of its growing in large bunches or tufts, is probably unrivalled as a natural pasture. Cattle and horses are found to thrive wonderfully on it, and to keep in excellent condition at all seasons; and, except when required to do work of an unusually hard nature, they need no other food. In the woods, and on the highest portions of the table-lands, this grass deteriorates in quality, attaining to its greatest perfection at the lower elevations, but the whole area is more or less available for grazing purposes. Thus the natural pastures of the midland belt may be estimated by hundreds, or even thousands, of square miles. Moreover, large portions of the soil possess properties very favourable to agricultnre, and, although influences of climate and altitude are somewhat discouraging, they are by no means formidable obstacles to the energetic settler. But the climate of this district, and the capabilities of its soil, will be more fully discussed hereafter. On the whole, the possession of this fertile belt is of considerable importance to British Columbia. From its salubrious climate, its varied agricultural and pastoral capabilities, and its proximity to the lucrative markets of the gold-fields, it promises to become a pleasant and profitable, if not a very extensive, field for settlement; and there can be no doubt that it holds out far greater inducements to the agricultural settler than the low woodlands of the Fraser estuary, where it is both costly and laborious to prepare the soil for tillage.

The third and last belt of territory, extending from the eastern limit of the table-lands to the watershed of the Rocky Mountains, needs no more than a very general description. Entering it from the west, the transition from level to hilly country is somewhat abrupt, and, advancing eastward, the general profile rises steadily, until it gains the level of the great backbone of the continent. In this tract, the features of the coast district are repeated, though even on a grander scale—and, as a remark generally accurate, it may be stated that, with slight interruptions, the entire area is covered with a sea of towering pine-clad mountains, enclosing gloomy valleys—that it contains a smaller amount of agricultural land than any other district in the colony, and is wholly uninhabited by white men, except at the mining district of Cariboo, in its northern extremity. Yet, although thus outwardly unattractive, this region claims importance as the depository of vast mineral wealth, and the birthplace of the great streams that distribute their auriferous treasures throughout the whole western area. To these phenomena, however, it will be necessary to refer in a future paragraph.

Of the rivers of British Columbia, the most important by far is the Fraser, which traverses the colony from north to south, and receives, on its passage, almost every other stream of importance. It takes its rise in the Leather Pass of the Rocky Mountains, and discharges by two principal mouths into the Gulf of Georgia, a few miles north of the international boundary; and, together with its tributaries, drains an area that may be roughly estimated at 90,000 square miles. From its source, the Fraser flows, an impetuous torrent, in a general north-westerly direction for 180 miles, reaching its extreme northern latitude at the parallel 54° 30′. Issuing near this point from one of the great valleys of the Rocky Mountains, it takes a bold sweep to the southward, and entering a more open region, soon assumes the proportions of a broad, navigable stream. Its course, however, is not entirely free from obstructions. Dangerous rapids, some of them wholly incapable of improvement, occur here and there, though fortunately the intermediate stretches of unbroken water are of considerable length; and it is at any rate interesting to know, in connexion with the subject of a future route across the continent by the Leather Pass, that no less than 200 miles of this upper portion of the Fraser can be made available for steam navigation at the seasons when the stream is free from ice, viz., from April to October inclusive. At Fort Alexander its average breadth is about 300 yards, the mean velocity of the current 5 miles an hour, and the extreme breadth of the valley, measured between the points where it breaks from the table-land on either side, is from 3 to 4 miles. And here, for the first time, is noticed the remarkable terraced formation of the river-banks, peculiar to nearly all the great watercourses of the central districts. This formation consists of a series of perfectly level terraces or "benches," rising in steps one above another to altitudes corresponding on either side of the streams, and is due, no doubt, to successive sudden degradations of the river-levels at remote periods, occasioned by the removal of large barriers of rock or other obstacles in the defiles further down the valleys.

Twenty miles below Fort Alexander the Fraser valley contracts in breadth, and the course of the stream, for 150 miles further south, lies in one of the deep, narrow chasms of the central tablelands. Here the river, already increased in volume by the accession of numerous large tributaries in the upper portion of its course, again becomes unnavigable, and its continually swelling waters, limited to a narrow channel, soon form a boiling torrent, increasing in velocity at every mile. At Lytton, the Fraser is joined by the Thompson, one of its largest affluents, and, entering the heart of the Cascade Range, rushes for 50 miles through a stupendous gateway, replete with all that is grand and terrible in mountain and river scenery. The valley gradually narrows in, until, at its intersection with the principal crest, it dwindles down to a mere cleft in the range. Here the features of the pass attain to their most gigantic proportions. The river itself seems a mere brook in comparison with the huge mountains which project upwards on either side to altitudes of 6000 and 7000 feet. Not unfrequently the slopes are almost wholly devoid of timber, and rise abruptly from the valley, massive, unbroken walls of granite and trap, standing in stupendous contrast to the forest scenery on the river-banks and islands. Here and there naked cliffs rise perpendicularly out of the water; elsewhere the slopes are covered with immense slides of disintegrated rock, and countless waterfalls, thundering down the crannies and crevices of the mountain sides, contribute to the wonders of the scene. At the ordinary stage of the river, the velocity of its current is from 12 to 15 miles an hour; but in summer, when its waters are swollen to twice their ordinary volume by the melting of the winter's snow, it rises, in this portion of the pass, to as much as 60 feet above its usual level, and, tearing down a rocky, narrow channel at the rate of 20 miles an hour, exhibits a terrific succession of rapids, falls, and whirlpools. At Yale the Fraser again becomes navigable, and 40 miles lower down emerges from the tangled network of hills, and sweeps in bold curves and with diminished velocity through the level lands of its estuary to the sea.

Unlike any of the other large rivers in British Columbia, the Fraser, throughout its entire course of 700 miles, nowhere expands into a lake. Its waters, therefore, arrive at the sea laden with sand and alluvium, and being there met by the cross-tides of the Gulf of Georgia, the particles hitherto borne along by the current are deposited outside the entrance proper of the river. Thus, a series of shoals have been formed at the mouth, extending 5 miles to seaward, and right and left to distances of 8 or 10 miles along the coast. Fortunately, however, the great volume and impetus of the stream ensure at least one navigable channel through these shoals, and, at present, vessels drawing as much as 20 feet of water can pass easily upwards to the capital, and even to some 20 miles beyond it.

New Westminster, the capital, stands on a commanding eminence on the right bank of the Fraser, 15 miles from the mouth. The population is small, seldom exceeding 500 whites, and the city itself has not advanced with the rapidity usual in new countries —a circumstance arising, in some measure, from the difficulty of clearing the site for building, and from the absence of considerable tracts of land in its immediate neighbourhood available for inexpensive tillage. Indeed, throughout the whole estuary of the Fraser—and more than anywhere, perhaps, in the neighbourhood of New Westminster—the forests attain to a greater luxuriance than in any other part of the colony. Foremost among the productions of the forest, in point of splendour and economic value, are the Douglas pine (*Abies Douglasii*), and the cedar (probably *juniperus occidentalis*). The former grows to the enormous height of 200 and even 300 feet, and possesses qualities that render it especially valuable as a timber both for planking and spars. The cedar, though not so lofty, possesses an immense girth, some of the finest trees measuring between 50 and 60 feet in circumference at a height of 4 or 5 feet above the ground. This wood is more especially valuable for roofing and other building purposes, for cabinet-work, and for all structures exposed to the continued action of water; and the natives turn its bark to profitable account in a hundred different ways. These, together with some half-dozen other valuable varieties of pine and fir, form the bulk of the larger and evergreen growth. There are also the alder, the dog-wood, and crab-apple, two varieties of maple, the cotton-wood (probably *Populus balsamifera*) of the marsh lands, and many other varieties of deciduous trees; and a dense array of wild-fruit and berry-bearing bushes, which form a luxuriant and impenetrable jungle. The forests thus composed are almost universal in the Fraser estuary, and extend, with but little variation in character, over the whole western slope of the Cascade Range. The only open tracts of land are those which are liable to periodical inundations at the seasons when the streams reach their highest levels, and the low marshy districts at the mouth of the Fraser, where the land is seen actually in process of formation.

But on crossing the mountains, and entering the central districts of the colony, the magnificent varieties of timber met with in the neighbourhood of the coast entirely disappear. Nevertheless, there is wood sufficient for all the requirements of the settler, and the symmetrical yellow pine (*Pinus ponderosa*), peculiar to this district, dots the grass-lands of the valleys and slopes, and forms a conspicuous and attractive feature in the landscape. In the interior mountainous belt the forests of the coast district are repeated, though on an inferior scale, a consequence, no doubt, of the increased elevation and the rigour of the climate; and the undergrowth is far less dense.

The whole of the inlets, bays, rivers, and lakes of British Columbia abound with varieties of delicious fish. The quantity of salmon that ascend the Fraser and other rivers on the coast every summer is almost incredible. The first enter the Fraser in March, and are followed in rapid succession by other varieties, which continue to arrive until the approach of winter ; but the great run occurs in July, August, and September. During these months, so abundant is the supply, that it may be asserted without exaggeration that some of the shallower streams can hardly be forded without stepping upon them. Apparently propelled by an undying desire to deposit their spawn at the head-waters of the various streams, vast shoals of these fish force their way annually to distances of 500 and 600 miles into the interior. Thousands perish from fatigue during this laborious ascent, and, on the subsidence of the waters, are left dead and decaying on the margins of the streams. On their way through the country they supply food for thousands of the natives, who, in fact, depend upon them in a great measure for their very existence, and at the time of the great runs, repair by whole tribes to the favourite fishing-grounds. The salmon are caught in a variety of ways. In the small rivers on the coast a dam is built, stretching from shore to shore, and rising high enough to create a considerable waterfall. On the top of the dam, and half immersed in the water, is placed a rude but ingeniously constructed weir, which entangles the fish as they jump the falls. At the mouths of the large rivers, where the currents are slight and the banks low, spearing from canoes is resorted to, and seine-fishing has been recently introduced by the whites. But in the cañons of the Fraser, and these are by far the most lucrative fishing-grounds in the whole colony, rude stages are built out from the cliffs, on which the natives stand with large scoop-nets, and thus bale the salmon out by hundreds, as they steal upwards in the eddies along shore. Occasionally, however—once perhaps in every 4 or 5 years—the supply almost fails; and although, by a wise dispensation, the natural fruits of the country are at such seasons proportionally more abundant, the natives nevertheless suffer fearfully from the dearth of their staple food.

Sturgeon, of as much as 500 lbs. in weight, abound in the lower part of the Fraser. As these fish usually lie at the bottom of the river, the Indian allows his canoe to drop quietly along with the current, and holds perpendicularly in his hand a long pole armed with a barbed trident fitted loosely on the lower end. The points of this trident are kept a few inches above the bottom. The moment the native feels a sturgeon, he strikes—the trident slips off the end of the pole, but, as it is further attached by a long running line to the canoe, the fish is eventually secured. The sturgeon are not confined to the Fraser; and instances are known of their having been caught in some of the far inland lakes. In the interior the brooks and highland lakes swarm with perch and several kinds of trout. Myriads of herrings frequent the bays and inlets on the coast, together with cod, flounders, hallibut, &c., and many varieties of cetaceous and shell-fish.

But, while the waters of British Columbia thus teem with life, its soil, on the contrary, is by no means so thickly inhabited. It is generally believed here in England that its vast forests are overrun by numberless wild animals, and afford magnificent hunting-grounds for the sportsman. This belief, however, is almost wholly erroneous; and the comparative absence of all but insect life in the forest is one of the first peculiarities that attracts the stranger's attention. Some twenty or five-and-twenty varieties make up the catalogue of the animal kingdom; and the individuals of each species are far from numerous in proportion to the enormous area they inhabit. Small, furred quadrupeds predominate, many of them being of the most valuable kinds, such as the marten and the silver-fox. Besides these, there are brown and grizzly bears, the elk, the black-tailed deer and reindeer, mountain sheep and goats, panthers, and some few other varieties. Birds are not much more numerous. Of these, which probably number one hundred varieties in all, water-fowl and birds of prey are by far the most abundant, though several descriptions of grouse frequent both the woods and plains. But, from the lack of food suitable for their support, birds of song are almost wholly wanting —a circumstance which, coupled with the scarcity of gay flora, materially heightens the natural gloom of the forests. Reptiles are still more rare. A few rattlesnakes are met with in the arid portions of the central belt, and several kinds of harmless snakes in the forests, and bull-frogs abound in the swamps; but the whole colony is utterly destitute of worms.

Travellers in British Columbia in the summer months will, however, all bear testimony to the abundance of insect life with which the air then teems. Foremost in numbers and powers of annoyance are the mosquitoes, which, on the subsidence of the rivers after the early summer floods, rise like a vast army from the earth, and invade almost every district in the colony. In the months of July and August these insects can only be described as forming a dense, humming, living cloud, which covers the country to a height of 20 feet above the ground. In the swamp-lands and along the margins of the watercourses, so multitudinous and venomous are they that horses and cattle have been known to die from the torment of their stings and the loss of blood. Although in open country the sun's heat and glare drive them by day to seek the nearest shelter, in the shade of the jungle they swarm both by night and day. Men and animals alike are thus fearfully harassed; and as the most fertile lands are generally also the most infested, the mosquito evil proves upon examination to be far more serious than at first sight appears. There are, moreover, other insect-pests, such as horse-flies, sand-flies, and a small, black, blood-sucking fly peculiar to high altitudes. House-flies are very plentiful, together with many brilliant varieties of butterflies, dragon-flies, and beetles.

The territories of British Columbia, extending over a wide range of latitude, and rising from the sea-level on the west to an altitude of 10,000 feet on the east, possess a correspondingly wide range of climate. They will be found, however, to present a marked contrast in their general thermal conditions to places in corresponding latitudes on the eastern side of the continent. This may be attributed, in the first place, to the absence of important Arctic currents on the Pacific coast, and the genial influences of the prevailing westerly winds—elements which serve to moderate the cold of winter; and, in the second place, to the neighbourhood of two great snow-covered ranges, which, although not without their chilling influence in winter, serve nevertheless to temper the summer heat. Thus, the mean annual range of temperature is far from excessive when circumstances of latitude and altitude are taken into consideration. The climate along the seaboard closely resembles that of many parts of Great Britain. The following Table shows the mean results of three years' meteorological observations at the Royal Engineer Camp, at New Westminster:—

MEAN RESULTS for the Years 1860-1-2.

Years 1860-1-2.	Rain.		Mean Temperature.		Humidity.		Mean Height of Barometer.	
	Number of Inches.	Number of Wet Days.	9·30 A.M.	3·30 P.M.	9·30 A.M.	3·30 P.M.	9·30 A.M.	3·30 P.M.
Means	54·124	150	48·5	52·5	·818	·797	29·956	29·924

Note.—The observatory is in lat. 49° 12′ N., being about that of St. Heliers, Jersey, or some 2½ degrees further north than Quebec. (Report by Captain R. M. Parsons, R.E.)

Of the 54 inches of rain here recorded as the mean annual fall, some 38 inches—an amount nearly corresponding with the mean fall for the whole year in the British Isles—fell on an average during the three first and three last months of the year. The mean temperature nearly corresponds with that of London; and the lowest temperature on the grass registered in the three years was — 15° Fahrenheit, on the 16th January 1862. But this degree of cold was an exception almost unparalleled in the memory of man; and was 25° Fahr. more intense than the greatest cold of either of the two previous years. During this severe frost, lakes in the interior, never before known to freeze, became covered with massive ice. The whole of the Fraser was frozen over, the ice at New Westminster attaining a thickness of 13 inches, and the river navigation remained closed for upwards of two months. Indeed, Yale, the head of steam navigation on the lower Fraser, was not accessible until a month later. This, however, is the only instance in the three years of an interruption of the navigation between New Westminster and the mouth of the river, though more or less floating ice of inconsiderable thickness usually encumbers the stream at some period or other during the winter.

To a short spring succeed four months of beautiful summer weather, usually terminating about the middle of September. During this delightful season little rain falls, and the days are generally bright and clear. Sea-breezes, blowing with great regularity from 11 A.M. until 5 P.M., temper the heat by day, the thermometer in the shade rarely rising above 80° in the hottest part of the summer; and by night, land-breezes blowing from the hills render the air deliciously cool and fresh. The break-up of settled weather is somewhat rapid; but in general the early frosts do not set in before the middle or latter end of October. About this time the heavy rains commence, the first snows soon appear on the hills, and thenceforward, until the middle of March, rain, fog, snow, and frost divide the days pretty equally between them.

The whole country to the west of the dividing ridge of the Cascade Mountains shares in the general humid and temperate characteristics of the climate of the Fraser estuary; but, on crossing the range, the eastern slope and the central belt beyond are found to exhibit some marked differences in their atmospheric conditions. Here but little rain falls, and some of the districts are exceedingly arid; indeed, in a narrow strip of territory lying immediately to the east of, and parallel to, the Cascade Range, the annual rainfall is incredibly small. And here again, notwithstanding the increased elevation, the seasons exhibit no remarkable extremes of temperature. The winters, though sharp enough for all the rivers and lakes to freeze, are calm and clear; so that the cold, even when most severe, is not keenly felt. Snow seldom exceeds 18 inches in depth; and in many of the valleys of moderate elevation even weakly cattle often range at large during the winter months, without requiring shelter or any food but the natural pastures. In spring and early summer the weather is more rainy and unsettled than at any other time of the year; but calm, cloudless skies prevail in July, August, and September; and although at this season the heat by day is somewhat greater here than on the coast—a circumstance arising in a great measure from the more open nature of the country—it is more than compensated by the extra coolness of the nights. Of the climate of the eastern belt very little is known, though the superior elevation and mountainous character of the whole region impart to it a greater rigour than is experienced in other parts of the colony. Yet even here the influences which serve to modify the temperature of the central and western districts seem to be not wanting; for all testimony concurs in assigning to the western slope of the Rocky Mountains a more temperate climate than is met with on the eastern side.

Judging from present experience, there can be no doubt that, in point of salubrity, the climate of British Columbia excels that of Great Britain, and is, indeed, one of the finest in the world. Moreover, it possesses elements peculiarly favourable to the European constitution,—an essential recommendation in the case of any British colony, but more especially of value when the wandering, open-air, and self-dependent habits of a gold-mining community are taken into consideration. There is an entire absence of pestilential localities, and in the pure, bracing mountain air men of even delicate frames soon acquire surprising vigour and healthiness of constitution. Thus the miners are enabled to face habitually, and without fear of detrimental effects, hardships and exposures under which, in less favourable climates, they would inevitably break down.

With the advantage of a magnificent climate, the rapid development of all the available resources of British Columbia may be with reason anticipated; and, as any but the most general remarks upon the qualities of the soil have been thus far omitted, it may not be uninteresting to conclude this hasty geographical sketch with a brief outline of the colony's agricultural and pastoral capabilities. With this object it will be necessary to return once more to the central belt, or rather to that portion of it lying to the east of the 124th meridian, which has been already spoken of as the most attractive district in the colony. Here, in sheltered and well-irrigated valleys, at altitudes of as much as 2500 feet above the sea, a few farming experiments have been already made, and the results have thus far been beyond measure encouraging. The soil, when well watered, is found to possess properties exceedingly favourable to the growth of nearly every variety of our English cereals and vegetables. At farms in the St. José and Beaver Valleys, situated nearly 2200 feet above the sea—and again, at Fort Alexander, at an altitude of 1450 feet—wheat has been found to produce nearly forty bushels to the acre, and other grain and vegetable crops to be abundant in like proportion. Again, at Pavillon, in the dry zone immediately to the east of the Cascade Range, the soil, aided by artificial irrigation, has proved to be prolific to a remarkable degree; the potato-crop having reached as high as 15 tons to the acre, and single turnips having been known to attain the enormous weight of 20 lbs. In Cut-off Valley also, on the shores of Okanagan Lake, and in many other favoured localities, equally astonishing results have been obtained.

The district, however, is not without its drawbacks. The farmer suffers occasionally from night-frosts extending far into the summer, from long droughts in the latter part of the season, and, still more often, from the difficulty and expense of irrigating the soil in the arid districts. Nevertheless, without going further into details, there is already abundant proof that many portions at least of this fertile belt are not wanting in most of the elements that conduce to successful agriculture. It will be remembered, too, that the experiments hitherto made are but first steps in husbandry, conducted under all the disadvantages of pioneering settlement at a few fertile spots in the immediate neighbourhood of the existing highways. And when it is further borne in mind that there are scores of valleys scattered up and down this region, now lying absolutely waste, which possess extensive tracts of suitable soil, the results of these early efforts furnish encouraging proof of what may be expected from an improved and more extensive system of agricultural settlement.

The pastoral capabilities of the central belt bid fair to be no less a source of future prosperity to British Columbia. Millions of cattle might graze over its luxuriant pastures, and exact but little tribute from the stock-farmer in the way of expenses for their maintenance. For, whatever precautions may hereafter prove to be indispensable in the more lofty portions of the grass-lands, experience thus far goes to prove—as has already been remarked—that at moderate elevations it is unnecessary to provide cattle either with shelter or additional food at any season of the year.

It may be asserted, then, without hesitation, that two-thirds, at least, of this eastern division of the central belt may, when occasion arises, be turned to good account either for purposes of grazing or tillage. Small though it may be—indeed, it is not more than one-fifth of the entire area treated of in this paper—this fertile tract is, nevertheless, of enormous value to British Columbia. This will be better understood when attention is drawn to the position of the Cariboo and other gold-mines, which are cut off from easy communication with the seaboard by a lofty range of mountains, and lie in the heart of a country lacking facilities for inexpensive transport. It then becomes evident that the possesssion of productive lands in the neighbourhood of the mines, capable of supplying them at moderate rates with the ordinary productions of the soil, is one of the first essentials to the proper development of the mineral wealth of the country. Moreover, it is obvious that, without productive lands, the colony can never hope to retain any but the most insignificant fraction of its auriferous treasures, and must for ever continue to be dependent upon other countries for its supplies. From its central position with reference to the mining districts, the fertile belt is well adapted for the supply of their markets; and, remembering that a country with but limited agricultural resources will feed a small and slowly-increasing population, such as that of British Columbia, it may fairly be anticipated that in the course of a few years every available portion of the soil will be brought by degrees under cultivation, and the whole region to the east of the Cascade Range be found to possess within itself ample resources for its own support.

We may search in vain throughout British Columbia for other inviting fields for agricultural settlement. The valley of the Lower Fraser, with its jungle and dense pine-forests, is but little likely to attract a large rural population for at least some time to come; though possibly enough land for the growth of supplies for the immediate neighbourhood may, ere long, be brought under cultivation; and the district is, at any rate, a limited one. Elsewhere, nearly all is mountain and forest and worthless land; so that, practically speaking, farming and stock-raising operations will, for the present, be almost wholly confined to the central districts. It would be unreasonable, therefore, to claim for British Columbia any comparison, in point of its agricultural and pastoral capabilities, with the more favoured possessions of our colonial empire—such as New Zealand, the Cape Colonies, and Australia—or the United States' territories, with their vast rich plains. Nor can it be pretended that the colony is likely ever to export grain, or to attract and retain a large population solely on account of its agricultural advantages. Yet there remains, at any rate, the gratifying assurance that, so long as gold continues to attract immigration, British Columbia can provide easily for the requirements of a considerable population, and at the same time contribute every facility for the further development of its mineral wealth.

Without pausing to dwell at any length upon a description of the native tribes, their language, habits, and superstitions, it may be remarked briefly that the statements which have been put forth in England to the effect that British Columbia swarms with bloodthirsty savages are almost wholly untrue. Although it cannot be denied that upon some occasions, when exasperated by drink or by interference with their lands, their women, or their superstitions, they have committed fearful crimes, it may be positively asserted that by nature they are a harmless, peaceful, and by no means bloodshedding people. The writer has travelled among them for years, and only once met with annoyance or interference. Degraded and immoral they certainly are, and, indeed, the whites are communicating to them vices likely to degrade them still further; but as faithful guides through the forest, untiring travellers, and expert canoemen, they are worthy of a great deal of our admiration. With these remarks it is proposed to pass on to the description of the gold-fields.

Cariboo—or, as it should have been more correctly spelt, "Caribou"—so named from its being the abode of that description of the reindeer, is at present the principal centre of gold-mining in British Columbia. This district lies within the great northerly elbow formed, as has been previously described, by the upper waters of the Fraser; and although mining operations have hitherto been limited to a small space on and about the 53rd parallel, the name may be considered as generally applicable to the whole area bounded to the south by the Quesnelle River and Lake, and on all other sides by the Fraser. Cariboo, so far as it has yet been examined, is found to be crowded with mountains of great altitude, very confused and irregular in character, and presenting steep, thickly-wooded slopes. Here and there tremendous isolated masses tower above the general level, rising, in their most elevated parts, to altitudes of 6000 and 7000 feet above the sea. At these high elevations forest-vegetation becomes dwarfed and scanty. Their summits and the upper parts of their slopes may be described as steep downs, clothed with tolerable grass, and dotted with small pine-plantations,—an aspect presenting so marked a contrast to the dense forests of the valleys and lower slopes as to have earned for them amongst the miners the not inappropriate title of "the Bald Hills of Cariboo." Of these, the best known are Mounts Agnes and Snowshoe—the former commonly called the Bald Mountain of Williams Creek—which rise to altitudes of about 6200 feet, and are fair types of the great hill-features of the district. Each, from its comparative isolation, is the nucleus of its own miniature hill-system, consisting of long subordinate ranges, shooting out in every direction from the central mass, and becoming, in their turn, the parent stems of innumerable still smaller spurs and ridges. Thus Cariboo, in its physical configuration, presents a confused maze of peaks and ranges, spurs, ravines, and valleys, preserving no distinct arrangement and bewildering alike to the topographer and the traveller.

Numberless streams of all sizes, from tiny rivulets to moderate rivers, drain the hill-system. The smallest are the "gulches," as miners call them—mere rivulets at ordinary times—which pour down narrow gullies and ravines on the mountain-sides, and any of which may be jumped over. The next are the "creeks," rapid streamlets about the size of an ordinary English brook, which drain the smaller valleys and are at present the scenes of the most active mining. The largest are the "rivers," into which the others fall, and which, from the peculiar position and drainage of the district, although flowing towards every quarter of the compass, eventually conduct the whole of the Cariboo waters to the Fraser.

The forests of the region, which, though very dense and extensive, bear no comparison in point of splendour or luxuriant growth with those of the Cascade Range, nevertheless contain many excellent varieties of pine and fir trees. They abound with martens, marmots, black bears, and some other varieties of furred animals, and the "Caribou" deer is found at the higher elevations. In winter, bands of Carriers—a scattered, intelligent Indian tribe, who occupy a large district north of the parallel 52° 30′—resort to Cariboo from their summer abodes on the large lakes and rivers, and hunt and trap in the mountains, following their game on snowshoes.

While presenting, as will be hereafter described, many phenomena that enlist the interest of the geographer and the geologist, Cariboo is not without features to attract the artist and the lover of wild scenery. Pages might easily be filled with descriptions of the magnificent views to be had in clear summer weather from the summits of any of the loftier hills. In the foreground, a tumbled sea of mountains; narrow, gloomy valleys; forest-clad slopes; and here and there the bleak, unwieldy masses of the bald hills patched with snow: far off, to the south and west, the softer outlines of the central table-lands; to the east, a cheerless, rugged region, crammed with serrated ranges of hills; and away behind them, the peaks and ridges of the Rocky Mountains, glistening with eternal snow, and visible through the clear air at almost incredible distances. These are some of the scenes that reward the tourist in this remarkable region, and furnish the artist with all the elements of grandeur he can desire.

It is late in the morning, even in midsummer, before the sun shines down on the mining-settlements of Cariboo,—brisk, thriving little wooden towns, lying hemmed in by hills in the deep valleys of the mining-creeks, at altitudes of from 3000 to 4000 feet above the sea. Here are assembled a motley population of adventurers of every class in society and from every country in the civilized world: traders, diggers, and idlers, and not a few gamblers and desperadoes,—men for the most part habituated to a frontier life and inured to its attendant discomforts. Indeed, the miner's life among the mountains and streams is fraught with hardship and danger. Few would imagine the amount of patience and endurance exhibited by the hardy pioneers or "prospectors"—those whose especial province it is to prosecute the search after gold. Cold and hunger, inclement weather, weary mountain-marches, constant exposure, and occasional isolation from all companionship, are a few of the discomforts habitually experienced by these sagacious men in their exploration of the country. Strange and touching tales might be told of their adventures in Cariboo, where, from the bewildering nature of the topography, they are frequently lost for days, if not altogether, in the dense forests of the hills and slopes. Not the least touching history is that of one poor fellow, a native of Scotland, who thus became separated from his comrades, and, after wandering about hopelessly for days until his strength failed him, lay down at last in utter despair, and then, after scratching his own epitaph on his tin cup, composed himself quietly to die.

The inclemency of the weather in Cariboo, and the rigour and length of the winter season are serious barriers to the proper development of its mineral wealth. At the end of September the first snows fall in the valleys, the mining "claims" can be "laid over"—that is to say, the laws which oblige miners to be at work on the spot are remitted for the time—and the greater part of the population retire to spend five or six months in the milder climates of the south. The winter weather consists of a succession of severe snow-storms, and fine clear intervals; the thermometer sometimes falls as low as 40° below zero (Fahrenheit), and every stream and lake becomes solid ice. Snow lies on the ground to a depth of about 6 feet in the valleys and accumulates in tremendous masses on the hill-tops, and all travelling, except on snowshoes, is suspended. During winter, surface-digging is naturally discontinued, though, from the absence of floods, deep underground excavations can then be prosecuted with all the more advantage, the auriferous gravel being brought to the surface and heaped in readiness for "washing" in the spring. Towards the end of March the streams begin to melt, and by May the thaw is at its height. Then Cariboo is by no means an enviable locality. Steaming mists envelope the forests in gloom, and the trees drip perpetual rain; trails and mountain-slopes become swampy and abominable to the last degree; creeks overflow their bounds; diggings become flooded, and the miners embarrassed by surplus water; and travelling is a toilsome operation for both man and beast. At this season hundreds of animals, carrying in the first convoys of provisions to the mines, succumb to want of food and exhausting journeys over wretched mountain-paths; and to this day the most loathsome, if not the saddest, sights that greet the traveller in Cariboo are the numberless carcasses of horses that have thus been literally tired to death, and generally left to rot on the wayside where they fell. On the 1st of June miners are compelled by law to be present and at work on their "claims." Then succeed two months or more of mild weather and drenching rains, notwithstanding which digging goes briskly on. In August and the early part of September a few weeks' bright sunny weather may be expected; the region now wears its most favourable aspect, the creeks fall rapidly, and the miner's harvest is at its height.

The radiation of groups of streams from within small areas on the upper slopes of the bald hills is one of the most peculiar features of the topography of Cariboo. From within a circle of not more than 3 miles in diameter, on the summit of Mount Agnes, issue the head-waters of five of the most notorious creeks in the district, their directions being towards every quarter of the compass. Similarly, the sources of no fewer than six others are contained within a small area on the summit of Snowshoe Mountain. The ancient and existing channels of these streams are the great depositories of the alluvial gold of the region,* the richest accumulations being found immediately over the bed-rocks, or rocks *in sitū*, which lie at all depths down to 150 feet below the surface of the soil. In Cariboo these bed-rocks are metamorphic clay-slates, traversed by broad bands of quartz. It is probable that all the particles of gold now found in the water-channels have, in the course of ages, been loosened, by water-action and other natural processes of disintegration, from their position in matrix in the native rocks of the region, and been eventually transported by the torrents to the localities where they are now found accumulated. As yet, the alluvial deposits in the immediate neighbourhood of the two great bald hills above mentioned have proved to be so extensive and remunerative, and, withal, so comparatively easy of access, as to have almost wholly engrossed the miners' attention. Indeed, it is confidently asserted by the most experienced diggers from California and Australia that, on 3 miles of Williams Creek—the present focus of Cariboo mining—more gold has already been extracted from the earth than from any corresponding stretch of mining-ground in those countries. For reasons which will presently appear, no extensive system of "prospecting" the whole region has as yet been attempted. But, judging from analogy, there is every reason to conjecture that the slaty gold-bearing rocks will be found to be distributed over a far greater area than has hitherto been examined, and that an extended system of exploration cannot fail to result in the discovery of fresh groups of streams, issuing from the slopes of neighbouring bald hills, and containing their rich hoards of alluvial gold. It would certainly be difficult to believe that the half-dozen water-channels which have yielded nearly all the gold hitherto exported from Cariboo can be the only rich spots in the region, or that a Williams Creek can have no associates of its own calibre; and, hence, it may fairly be inferred that the alluvial diggings of Cariboo promise, of themselves, to afford lucrative employment to a large mining population for many years to come.

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* But, although gold collected by water-action is thus found in lines radiating from a central point, it will not, on that account, be for one moment supposed that auriferous rocks "radiate" in that manner. It is probable, nay almost certain, that rocks containing gold in matrix are pretty generally distributed over the whole of the districts coursed by these streams, although the water-channels at present afford the greatest facilities for mining.

Apart, however, from the question of alluvial wealth, it may be assumed with almost absolute certainty that the auriferous veins which permeate the parent ranges—and are believed to have supplied by their partial disintegration the gold found in the river-beds—are not yet wholly exhausted of their treasures; and that, eventually, the more costly and elaborate operations of quartz-mining will, under an improved condition of civilization and commerce, engage the attention of capitalists. If this assumption be correct—and there is little room for doubt as to its accuracy—Cariboo, even as it stands at present, and without reference to the other unexamined localities in the immediate neighbourhood, must be regarded as one of the richest and most inexhaustible known gold-fields in the world.

Williams, Lightning, Antler, and Lowhee Creeks, are the most remarkable in the district. On each of these, the gold, though all of the description termed "coarse," nevertheless differs materially both in appearance and intrinsic value. On Williams Creek, for instance, the particles are smooth and water-worn, and contain a large amount of alloy; whereas, on Lowhee Creek, not 5 miles off, they are more crystalline in structure and exceedingly pure; the latter, when assayed, being found to yield nearly 8*s.* per ounce troy more than the former. And on no two creeks do the particles bear an exact resemblance in character to one another. A no less remarkable feature of the auriferous districts is the unevenness with which the alluvial deposits of gold are scattered over the bed-rocks. The larger particles are generally found to be accumulated in detached heaps, in rich "pockets," in crevices and angles of the rocks, and the "leads," or strata of highly auriferous gravel, are marked by a constant succession of wide intervals and abrupt changes in level and direction which baffle the most experienced miners. From this peculiar inequality of distribution it arises that, whereas those who are lucky enough to alight upon the rich "leads" or "pockets" rapidly amass considerable sums of gold, the less fortunate miners, who happen to possess "claims," or allotments of mining-ground, in neighbouring, though comparatively unproductive, areas, derive but little benefit from their labours. Enormous sums are thus being constantly squandered in fruitless mining-operations, and cases of utter failure are, as a consequence, exceedingly numerous.

Nevertheless, the gross annual proceeds from the mines continue year by year to increase, and have at length reached to an enormous sum. It is estimated that, during the height of the last summer season, the average daily harvest upon Williams Creek alone amounted to no less than 2000 ozs., or over 6000*l.* sterling. The principal partner in the notorious Cameron claim returned to his native town in Canada three months ago with 30,000*l.* in his pocket, all amassed in one year. And an almost incredible instance of rapidly-acquired wealth is that of the three partners in the "Hard Curry" Company, who, one evening in the spring of last year, returned to their tents with 102 lbs. weight of gold (about 4000*l.* sterling), as the result of a single day's labour on their claim. These, it need hardly be mentioned, are exceptional cases, but they are of interest, as serving to indicate the amazing wealth of some of the rich "pockets" before alluded to. In this manner, numbers of miners have, during the last three years, been enriched in the course of a few weeks or even days. Hundreds, on the other hand, have realised but little at the end of their season's work; and it is to be feared that by far the greater proportion have with difficulty cleared their expenses. Hitherto, indeed, the cost of working claims and prospecting water-channels has been so enormous as to have proved a very serious detriment to the general prosperity of the district. Nor are other drawbacks wanting. The severity of the weather, the shortness of the summer season, the peculiar hardships of life in the wilderness, and the fatigue and expense incident to the journey from New Westminster to Cariboo, are elements little conducing to rapid occupation or successful mining. But, in the main, the tardy advancement and expansion of the mining-districts has been due to the exorbitant prices of labour, food, and material. The tax upon the clear profits of steadily-paying claims has thus been enormous. For example, one famous company on Williams Creek extracted 40,000*l.* worth of gold last year from their claim, yet were only able to declare dividends to the extent of 20,000*l.*; exactly one-half of the entire proceeds having been swallowed up in the shape of expenses. And this is but one of many instances of the same kind. They will excite but little surprise, however, when it is explained that the gold-field is situated 500 miles in the interior of a young colony, hitherto unprovided with good roads, and almost wholly destitute of any but imported supplies. Until quite recently, nearly every pound of provisions for consumption at the mines—fresh animal and vegetable food alone excepted—to say nothing of the necessary supplies of tools and material, was carried for hundreds of miles into Cariboo on the backs of mules and horses, and even of the miners themselves. Hence, the price of every imported article rose to an enormous figure at the diggings. Even flour has for years past cost on an average 4*s.* a pound. Twenty shillings have been given for a pound of common nails, and half as much again for a mess of fresh vegetables. This high tariff of provisions and material created a correspondingly high scale of pay for labour. The ordinary navvy received from 30*s.* to 40*s.* for his day's work, while the mechanic might earn from two to three guineas; and, in the experience of the writer, a hair-cutter at Lightning Creek charged at the rate of about 7*d.* a minute for his services.

While exacting heavy tribute from the richest and most successful diggers, these enormous prices, together with the limited and frequently overstocked condition of the labour-market, fell upon the needy and unsuccessful with an effect that was absolutely ruinous. Men of slender means, and others who had quickly sacrificed their capital in fruitless mining-operations—unable to get employment, or to support themselves in a country where it cost from 15*s.* to 20*s.* a day to procure the bare necessaries of life—hurried away almost as soon as they came, without pausing any longer to "prospect" in so expensive a locality. In this manner anything like a deliberate examination of the country has been completely prevented. Moreover, by reason of the extravagant cost of every commodity, continuous mining-operations have hitherto been practically limited to the very richest spots in the district, and, even then, to the most productive strata of auriferous gravel. In localities where hired labour cost 40*s.* a day, it became obvious that it would never pay to work diggings which would not yield at least that amount to the individual labourer, over and above all contingent expenses. On this account, the operations of working claims have been confined to the gravel lying immediately upon the bed-rocks, where the richest deposits are found; and the upper strata, containing amounts of gold, which, but for the enormous price of labour, would have well repaid the cost of working them, have been left altogether untouched. In like manner, surface-diggings—capable under more favourable circumstances of supporting a large mining-population—remain as yet undisturbed.

It is no wonder, then, if in the face of all these impediments the actual profits of Cariboo mining have, in the majority of instances, been far from considerable. Nevertheless, there can be no doubt, upon a consideration of the history of the region up to the present time, that it teems with productive gold-mines, practically boundless in extent, and promising lucrative employment to thousands so soon as an improved system of communications and commerce shall admit of their fuller development, and of the introduction of the many economical appliances of civilization.

Cariboo, however, is by no means the only auriferous district in British Columbia. The bars of Fraser River, throughout the greater part of its course, are not nearly stripped, as yet, of their accumulations of "fine" gold. Moreover, the accuracy of a theory long ago advanced by the present distinguished President of the Royal Geographical Society—to the effect that gold in the matrix would be found distributed all along the hilly districts bordering on the western slope of the Rocky Mountains—is yearly being more and more satisfactorily established. Desultory explorations, made at different times within the last four years, have resulted in the discovery of a chain of auriferous deposits, extending at intervals from the southern boundary of the colony to the 56th parallel of latitude, and preserving a direction parallel, or nearly so, to the crest of the Rocky Mountains. Rock Creek in the extreme south, the head-waters of the Okanagan, the tributaries of the north and south branches of the Thompson River, the south and north branches of Quesnelle River, Cariboo, and, finally, Peace River, near its intersection with the meridian 122° w., are so many successive points in this chain, at all of which gold in varying quantities has been found. These and other intermediate discoveries have established, almost beyond a doubt, the existence of a vast auriferous zone or belt of country, more than 500 miles in length, comprising within its limits the sources of all the great gold-yielding streams that water British Columbia; and forming, in all probability, the depository of incalculable wealth.

Should this range indeed prove, upon future examination, to be the matrix of the auriferous wealth of the colony, there can be no doubt that British Columbia must in time become, steadily but surely, one of the most important dependencies of the British empire. The certainty of the possession of extensive and practically inexhaustible gold-fields along the immediate outskirts of the central belt would at once impart a wonderful stimulus to the settlement of its agricultural and pastoral lands, and at the same time improved communications would ere long be established. Thus the enormous prices of labour and commodities in the gold-regions would rapidly disappear, and full scope be afforded for the proper and patient exploration of the mineral wealth of the land.

The first steps towards improvement have been already made. Settlement, as has been before remarked, is gradually creeping over the midland districts; and, even now, Cariboo, one point in the auriferous range, is beginning to enjoy the advantages derivable from cheap communication and the cultivation of neighbouring districts. The efforts of the local Government within the last five years have at length resulted in the completion of a system of excellent waggon-roads, leading through the most promising districts of the colony to within a short distance of Cariboo. Miners or others, to whom time is of value, need no longer perform weary journeys on foot or on horseback over wretched trails and through an uncivilized if not totally uninhabited country. A steamer-voyage of 90 miles from New Westminster terminates at Yale, the head of steam-navigation on the Lower Fraser. Throughout half this distance the river winds among the gorgeous forests of its estuary, slight clearings here and there revealing native villages and the shanties of the woodmen who prepare fuel for the steamers. Higher up, the hills approach the stream, the current becomes rapid, and small Chinese mining-camps dot the banks and bars. From Yale upwards, a noble road executed at vast labour and outlay enters the passes of the Fraser, and traverses the faces of cliffs and precipices and slides of disintegrated rock, that, two years ago, seemed to bid defiance to any efforts of the engineer. For 60 miles upwards it winds through the magnificent scenery of the Cañons—the subject of a former description—crossing over to the left bank of the river by a suspension-bridge thrown across the chasm at a point where it is only 90 yards in width. Soon after passing Lytton the forest is left behind, and the road approaches the belt of pastoral country, and, gradually emerging from the Cascade Range, reaches the green hills and valleys and the picturesque country of the central districts. From a point 20 miles below Fort Alexander the Fraser may again be ascended in a small steam-vessel built on the spot, for which all the machinery and fittings were carried up on mules' backs long before the road was finished for waggon-traffic. Disembarking at the mouth of the Quesnelle, the traveller reaches Williams Creek by a ride of 60 miles over the one good trail in Cariboo. A westerly loop of this route, branching off 40 miles above New Westminster, passes through a low gap in the Cascade Range, along a chain of lakes connected by roads, and rejoins it 150 miles south of Fort Alexander.

It has been considered questionable whether the Fraser River is likely to continue to be the great avenue for the conveyance of all traffic towards the mining-districts, and several of the more northerly inlets on the coast have been recently examined with the view of discovering a shorter route to Cariboo. The results of these examinations are on the whole discouraging. It appears, from reports on the subjects, that while the rivers which discharge into these inlets are unnavigable for steamers, and facilities for the establishment of seaport-towns almost wholly wanting, the districts which would be traversed in crossing from the coast to the mines are generally sterile and unattractive, and lie at too high an elevation to admit of the establishment of really good permanent routes. Moreover, it is shown that the actual shortening of the amount of land-communication would be almost inappreciable, since the Fraser admits of navigation both in the lower and upper portions of its course. These and other drawbacks are likely to lead to the abandonment of any projects for the establishment of coast-routes for at any rate some time to come, and, keeping in view the probable extension of the gold-fields southward from Cariboo, it seems likely that the existing routes will in future be adopted as the permanent highways of commerce.

The journey from New Westminster to Cariboo, by either of these routes, may now be easily accomplished in from six to seven days. As yet the benefits arising from improved communications have hardly had time to become manifest, for it was not until the close of last summer that the new roads were thrown entirely open for traffic; but already inns and incipient farms, dotting the wayside at almost every turn, mark the first growth of settlement, and begin to break the solitude of the journey. With new roads, a new day has dawned upon British Columbia. Already the foundations of its ultimate prosperity seem to have been securely laid, and it only remains to hope that in days to come its rich harvests may be participated in by British subjects much more largely than they are at present.

From its advantages of geographical position, its vast mineral wealth, its salubrious climate, and valuable natural products, it seems but fair to anticipate that, under good government and by a process of gradual development, British Columbia will ere long take rank as not the least important of the Colonies of the Crown.